



## Koneru Lakshmaiah Education Foundation

(Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A' Grade University ♦ Approved by AICTE ♦ ISO 9001-2015 Certified

Campus: Green Fields, Vaddeswaram - 522 502, Guntur District, Andhra Pradesh, INDIA.

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Department of PHYSICS

DATE: 28/02/2022

**Report on the Guest Lecture arranged on the Eve of National Science Day 2022 with the theme “Integrated Approach in S & T for sustainable future” jointly organised by the Dept. of Physics, KLEF, Vaddeswaram and Materials Research Society of India (MRSI), India on 28/02/2022 from 1:00 to 3:45 pm IST**

The Guest Lecture started exactly at 1 pm and waited for few minutes to join for the remaining participants. The session began with addressing the participants by the Convenor (Dr KRK) followed by the HOD madam highlighted about the department (Academics and Research) briefly to the participants and resource persons along with the opening remarks of the guest lecture and highlighted the importance and significance of National Science Day in India. Also, the Co-Convenor Dr MVVKS Prasad spoke few words about the importance of NSD and its relevance to Materials Science & Engineering. After this, immediately we started the presentations by our resource persons one by one by giving their introduction to the participants. The seminar ended with a vote of thanks given by the Convenor (Dr KRK) and finally requested the participants to fill the feedback form where the link is shared in WebEx chat box to generate and receive their e-certificates. With this, the guest lecture was ended on a grand note and very successful in holding 42 participants online throughout the duration which went for about 2 h 50 min.

Information communicated on 25/02/2022 to get registrations from the participants and the same was shared to the previous participants through whatsapp, email and other social media platforms.

The Department of Physics (DST-FIST Sponsored), KLEF, Guntur jointly organised a **Guest Lecture arranged on the Eve of National Science Day 2022 with the theme “Integrated Approach in S & T for sustainable future”** in association with Materials Research Society of India (MRSI), India.

The details are as follows:

Topic: **National Science Day**

Date: 28<sup>th</sup> February 2022 (Monday)

Time: 1:00 pm – 4:00 pm (Indian Standard Time)

Online Platform: Cisco WebEx

**NO REGISTRATION FEE**

Registration Link: <https://forms.gle/pNGxfoXnp8hfeGWo6>

E-certificate will be provided to the registered participants those who submitted feedback form and attending all the sessions.

### Resource Persons:

1. Dr. Y. Ashok Kumar Reddy, Assistant Professor, Dept of Physics, Indian Institute of Information Technology- Design and Manufacturing, Kancheepuram (IIITDMK), Kancheepuram, Tamilnadu, India.
2. Dr. Eswaraiah Varla, Research Assistant Professor, Dept of Physics, SRM Institute of Science & Technology, Chennai, Tamilnadu, India.

Join the meeting here:

<https://kluniversity.webex.com/kluniversity/j.php?MTID=m698cc0c4c2e8038298ae7e2a1187a5db>

For any queries on the webinar, the following are contacted.

Dr. K. Raghavendra Kumar, Assoc. Prof. & Convenor, Dept. of Physics,

Email: [rkkanike@kluniversity.in](mailto:rkkanike@kluniversity.in), Mobile: 9391392189.

Dr. MVVK Srinivas Prasad, Asst. Prof., & Co-Convenor, Dept of Physics, KLEF, Vaddeswaram, AP. Email:- [mutyasrinivas@kluniversity.in](mailto:mutyasrinivas@kluniversity.in) ; Mobile:- 9985336448.

##### STAY HOME, STAY SAFE, STAY HEALTHY .....#####

With regards

Program Chair

Dr. G. Sunita Sundari, Associate Professor & HOD, Department of Physics, Koneru Lakshmaiah Education Foundation (KLEF), Vijayawada, Andhra Pradesh.

1. Poster designed for communication purpose to conduct Guest Lecture

**KL UNIVERSITY**  
CATEGORY 1 UNIVERSITY  
OF INDIA, Govt. of India  
RANKED 35 AMONG ALL UNIVERSITIES  
41 YEARS OF EDUCATIONAL LEADERSHIP  
KL ACCREDITED BY NAAC WITH A++ GRADE

**DEPARTMENT OF PHYSICS**

**MATERIALS RESEARCH SOCIETY OF INDIA**

**GUEST LECTURE**  
On the Eve of  
**NATIONAL SCIENCE DAY - 2022**  
Theme : "Integrated Approach in Science and Technology for a sustainable future"

**Keynote Speakers**

**Dr. Y. Ashok Kumar Reddy**  
Indian Institute of Information Technology  
Design and Manufacturing (IIITDM),  
Kancheepuram, Chennai,  
India.

**Dr. Eswaraiah Varla**  
SRM Institute of Science and Technology,  
Kattankulathur, Tamil Nadu,  
India.

**Organized by**  
Department of Physics  
K. L. (Deemed to be) University, Guntur.  
Chair: Dr. G. Sunita Sundari, HOD, Dept. of Physics, KLU  
Convenors: Dr. K. Raghavendra Kumar, Assoc. Dept. of Physics, KLU  
Dr. M V V K Srinivas Prasad, Assist. Dept. of Physics, KLU

**February 28**  
On 28<sup>th</sup> February 2022 (Monday)  
01:00 pm to 03.00 pm

**Join free**  
Registration link & Scan for QR  
<https://forms.gle/pNGxf0Xnp8HfeGWo6>

**Platform:**  
Cisco WebEx

E-Certificates will be provided to all registered participants.

Stay Protected from Corona | Wear your Mask Properly | Follow Proper Hand Hygiene | Maintain Social Distancing | Get Vaccinated

2. Whats app group created for easy communication and updating the information to registered participants. Online meeting link shall be provided through Whatsapp group.

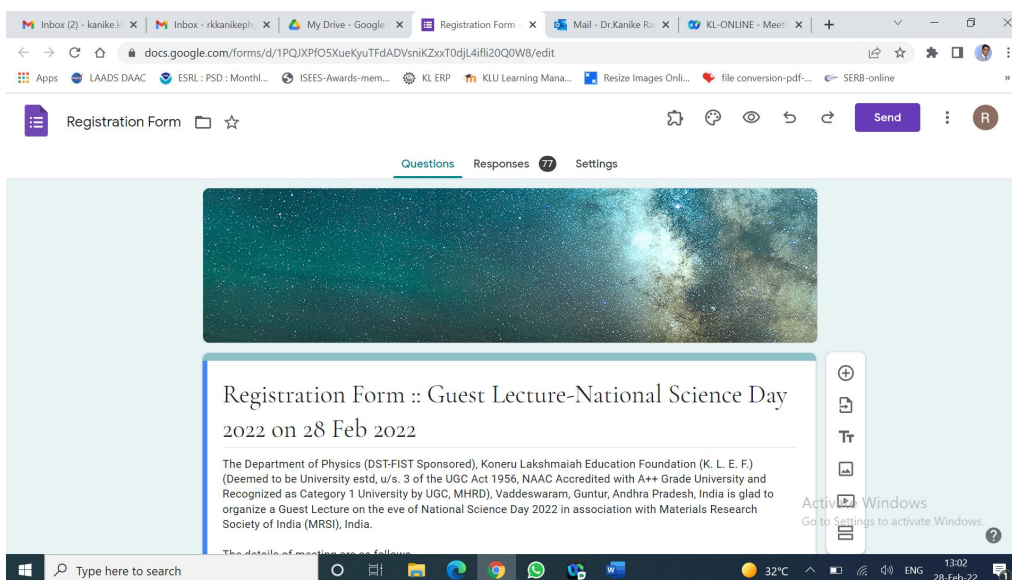
The Department of Physics (DST-FIST Sponsored), KLEF, Guntur jointly organised a **Guest Lecture arranged on the Eve of National Science Day 2022 with the theme “Integrated Approach in S & T for sustainable future”** in association with Materials Research Society of India (MRSI), India **was conducted and completed successfully on 28/02/2022 between 1:00 and 4:00 pm (IST).**

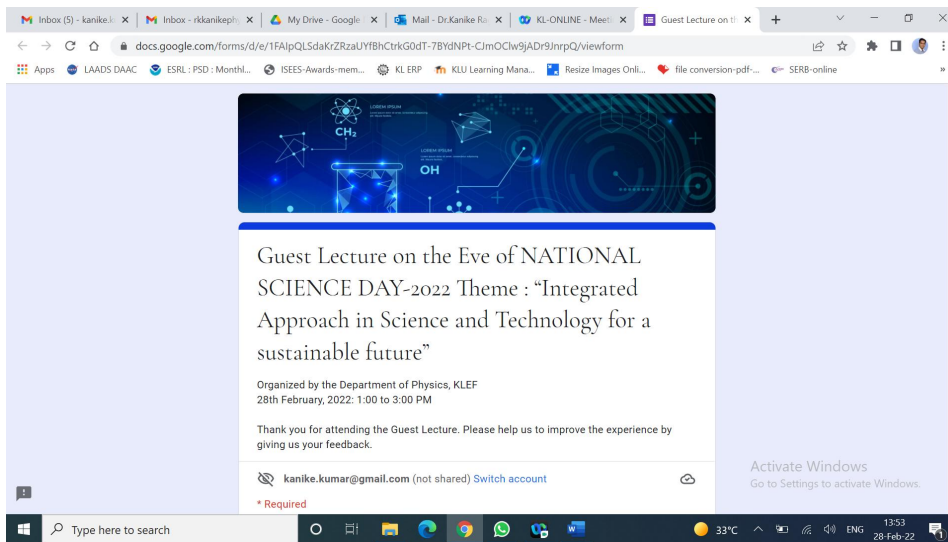
Thanks to the CCO & Director, Dean-MHS, Principal-Sciences, Coordinator of FED, HoD (Dept of Physics), and Physics faculty on successful completion of National Seminar. Special thanks to the Management and higher authorities of KLEF, Vaddeswaram, Guntur.

1. E-Certificates were issued to participants who registered, participated/attended the guest lecture, and successfully submitted the feedback form. A Sample certificate is attached here.



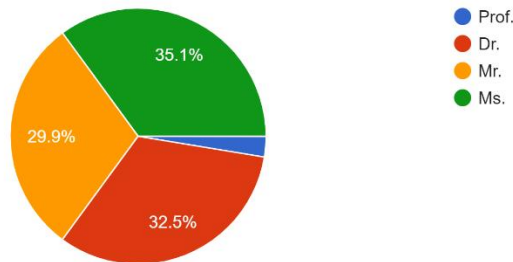
2. Registration and feedback forms and responses from the participants with statistics  
Total registrations received: 77





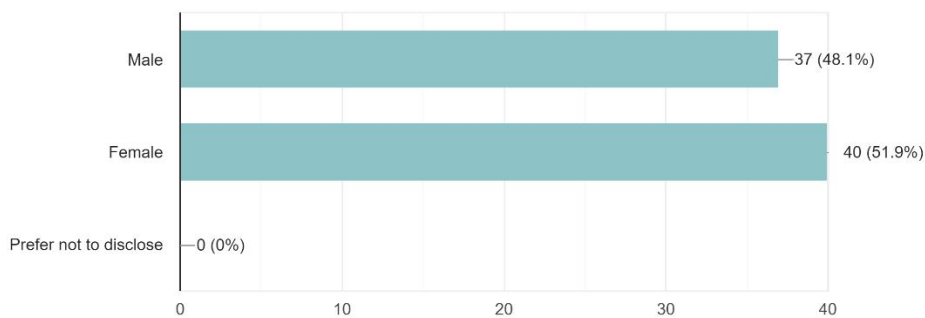
### Salutation

77 responses



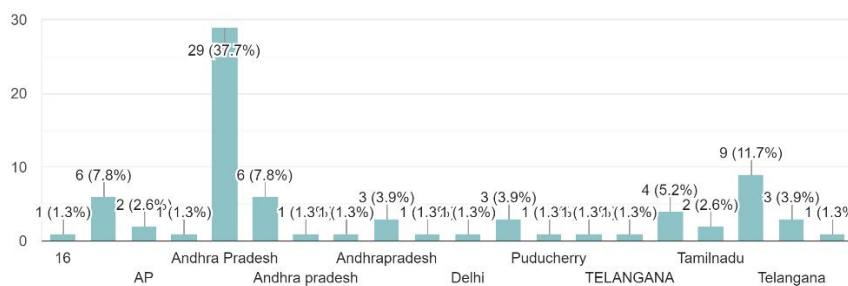
### Gender

77 responses

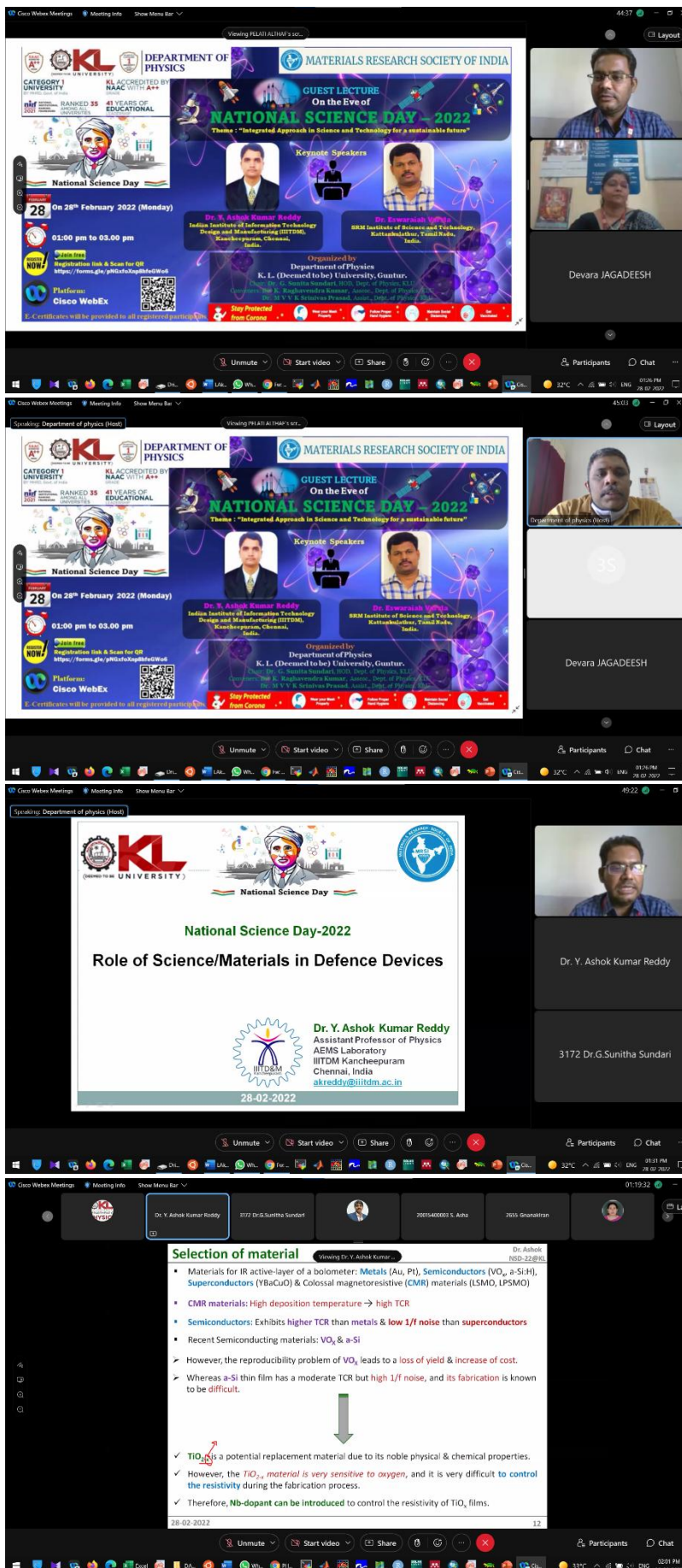


### State/Province

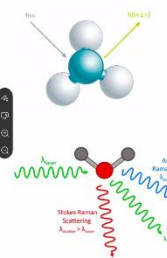
77 responses




3. Screenshots/photos taken during the international webinar are attached below as proof.



## Raman effect



Fellow of the Royal Society (1924)  
Matteucci Medal (1928)  
Knight Bachelor (1930)  
Hughes Prize (1930)  
Nobel prize in Physics (1930)  
Bharat Ratna (1954)  
Lenin Peace Prize (1957)



28/02/22

Unmute Start video Share

Participants Chat

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## Raman Spectrophotometers



Witec



Horiba



Malvern

28/02/22

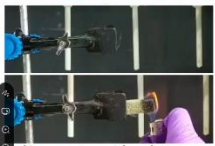
Unmute Start video Share

Participants Chat

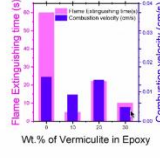
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## Nanocomposites based protective coatings

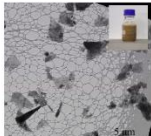
Real time demonstration video



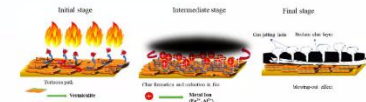
Abimannan, Eswaraiah et al. 2022 (Indian patent filed)



Wt.% of Vermiculite in Epoxy	Flame Extinguishing time (s)	Combustion velocity (cm/s)
0	~10	~100
1	~20	~80
2	~30	~60
3	~40	~40
4	~50	~20



TEM image of vermiculite nanosheets



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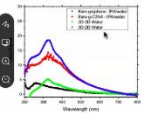
Participants Chat

35°C 28-02-2022 03:30 PM

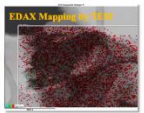
## Development of Functional Layered Nano Composite for Antimicrobial Coatings Application

Priyanka, M.Tech FYP


- Why 2-D Material?**
  - Behavior of material influenced by multiple factors (lateral size, Sharp edges, number of layers, surface chemistry, and interacting conditions with bacteria)
- Methodology - Liquid Phase Exfoliation (Including Sonication & Centrifugation) - Stabilization of Exfoliated Graphene by Exfoliated g-C<sub>3</sub>N<sub>4</sub> - (Stabilization of one 2D material by another 2D material)**



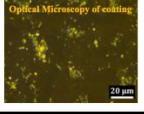
SAED Analysis



EDAX Mapping



Wrapping and Trapping mechanism



Optical Microscopy of coating

Application - Aerosols, Paint system, Coating over different substrates (SS, PET, Titanium)

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Participants Chat

35°C 28-02-2022 03:37 PM